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JP03053114

POSITION DETECTOR
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Abstract: PURPOSE: To always accurately detect a position by detecting the extent of displacement between a scale and a detecting head as the absolute position in accordance with the absolute position of resolution λ/l (λ is the pitch, and l is an integer ≥ 2), the absolute position in one pitch, and a correction value.

CONSTITUTION: The resolution of a gray code 37 is determined to satisfy λ/l where λ is the pitch of graduations 36. The phase detection signal and the absolute position signal from a detecting head 38 are supplied to a phase detecting circuit 41 and an absolute position code detecting circuit 42. A phase quantity θ corresponding to graduations 36 is detected by the circuit 41, and an absolute position Δx in one pitch λ of graduations 36 is calculated and is supplied to correction position and absolute position calculating circuits 43 and 44. Absolute position data N corresponding to the code 37 is detected by the circuit 42 and is supplied to circuits 43 and 44. A correction value ΔF is calculated in the circuit 43 and is supplied to the circuit 44, and an extent (x) of relative displacement (absolute position) based on origins of a scale 35 and a head 38 is calculated in the circuit 44. This calculated position (x) is supplied to a display device 45.

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Int'l Class: G01D005245; G01D00512 G01D005243 G01D00534

MicroPatent Reference Number: 000127424

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